

CLAIMS:

1. A pressure-sensitive adhesive composition for medical pressure-sensitive adhesive tapes, comprising a base polymer containing a pressure-sensitive adhesive polymer obtained by crosslinking or curing a precursor containing a urethane acrylate oligomer and an ultraviolet (UV) initiator, said base polymer having a glass transition temperature (T_g) of 0°C or less.

2. The pressure-sensitive adhesive composition as claimed in claim 1, which further comprises a plasticizer.

3. The pressure-sensitive adhesive composition as claimed in claim 1 or 2, wherein said urethane acrylate oligomer is an oligomer obtained by reacting a mixture containing a polyalkylene glycol, an organic isocyanate having two or more isocyanate groups, and a compound having both a functional group reactive with the isocyanate group and a (meth)acryloyl group.

4. The pressure-sensitive adhesive composition as claimed in claim 3, wherein the content of the unit derived from the compound having both a functional group reactive with the isocyanate group and a (meth)acryloyl group in said urethane acrylate oligomer is from 0.35 to 0.6 mol%.

5. The pressure-sensitive adhesive composition as claimed in claim 4, wherein the content of said unit is from 0.40 to 0.45 mol%.

6. The pressure-sensitive adhesive composition as claimed in any one of claims 1 to 5, wherein said urethane acrylate oligomer further contains a carboxyl group.

7. The pressure-sensitive adhesive composition as claimed in claim 6, wherein said plasticizer is a hydrophilic plasticizer having, as the hydrophilic group, a hydroxyl group capable of hydrogen-bonding to a carboxyl group.

8. The pressure-sensitive adhesive composition as claimed in any one of claims 1 to 7, which further comprises an antioxidant.

5 9. The pressure-sensitive adhesive composition as claimed in claim 8, wherein said antioxidant contains a hindered phenol-base antioxidant.

10 10. The pressure-sensitive adhesive composition as claimed in any one of claims 1 to 9, wherein said precursor contains said ultraviolet (UV) initiator in an amount of 0.01 to 1.0 mass% based on the mass of said urethane acrylate oligomer.

11. A medical pressure-sensitive adhesive tape comprising a highly moisture-permeable substrate having thereon the pressure-sensitive adhesive composition claimed in any one of claims 1 to 10.

15 12. A medical pressure-sensitive adhesive tape consisting of a layer of the pressure-sensitive adhesive composition claimed in any one of claims 1 to 10.

13. A method for producing a pressure-sensitive adhesive composition for medical pressure-sensitive adhesive tapes, comprising:

20 mixing a pressure-sensitive adhesive composition precursor containing a urethane acrylate oligomer and an ultraviolet (UV) initiator,

heating said adhesive composition precursor at a temperature of 50°C to less than 100°C to form a coating solution having a viscosity of 2,000 to 100,000 mPa·s, and

25 applying said coating solution to a substrate and thereafter, crosslinking or curing said urethane acrylate oligomer to form a base polymer having a glass transition temperature (T_g) of 0°C or less.